DOCUMENT RESUME

ED 078 142 VT 020 219

AUTHOR	Ramp, Wayne S.; Reeder, Rcnald C.
TITLE	An Analysis and Synthesis of State Certification Requirements for Teachers of Secondary Trades and Industries and Post Secondary Trades and Technical Programs.
INSTITUTION	Southern Illinois Univ., Carbondale. Dept. of Technical and Industrial Education.
PUB DATE	Oct 70
NOTE	63p.
EDRS PRICE	MF-$0.65 HC-$3.29
DESCRIPTORS	Comparative Analysis; Educational Research; Education Courses; Post Secondary Education; Secondary Grades; *State Standards; *Teacher Certification; *Teacher Education; *Technical Education; *Trade and Industrial Education; Vocational Education; Work Experience

ABSTRACT

To meet the increasing demand for teachers in vocaticnal programs, most states have adopted requirements for certification different from that of teachers of academic subjects. What these qualifications are and how much they vary from state to state is information of much concern to vocational educators. This study sought to identify the differences and similarities in trade and industrial education certification requirements at the secondary and post-secondary level in all of the 50 states and the District of Columbia. Questionnaires were used to obtain the data. Findings revealed that: (1) At both educational levels, the emphasis was upon work experience rather than formal education for the beginning teacher. While some states required some formal education, many required little or no professional teacher training, (2) Post-secondary teacher qualification was patterned after requirements for secondary teachers in most states; however, in post-secondary technical programs, technical knowledge tcok precedence over years of job experience in many states. Teacher qualification requirements at the post-secondary level were generally less specific than secondary requirements, possibly to allow more latitude in teacher recruitment and preparation. (Author/SN)

ED 078142

An Analysis and Synthesis of State Certification Requirements for Teachers of Secondary Trades and Industries and Post Secondary Trades and Technical Programs

By Wayne S. Ramp

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AN ANALYSIS AND SYNTHESIS OF STATE CERTIFICATION REQUIREMENTS FOR TEACHERS OF SECONDARY TRADES AND INDUSTRIES AND POST SECONDARY TRADES AND TECHNICAL PROGRAMS

by

Wayne S. Ramp, Professor, Technical and Industrial Education

and

Ronald C. Reeder, Research Assistant, Technical and Industrial Education

Southern Illinois University
School of Technology
Department of Technical
and Industrial Education
October, 1970

PREFACE

The increased emphasis on vocational education in recent years has created many problems in the areas of planning, facility expansion and personnel development. In this latter area, problems of teacher recruitment and training are prevalent throughout the United States in areas of both secondary and post-secondary education.

To meet the increasing demand for teachers in vocational programs, most states have adopted requirements for certification that are quite different from their requirements for academic subject teachers. In academic areas at the secondary level, a baccalaureate degree in education is the standard minimum requirement for teacher certification. However, vocational certification at both the secondary and post-secondary level is based upon occupational competency in the specialty areas, as well as academic accomplishment. In many states, certification of teachers in post-secondary technical and trades programs is not required at all. Further, qualification requirements for vocational teachers are tailored by each individual state, and adjusted to alleviate varying teacher shortages in those states. Consequently, certification requirements are vastly different from state to state.

What these vocational teacher qualification requirements are, and how much they vary from state to state, is information of great importance to all teacher educators, teachers, and future teachers in vocational education. The purpose of this study was to identify those aspects of vocational teacher qualification requirements in the area of trade and industrial education at the secondary and post-secondary level, in all fifty states and the District of Columbia.

Sincere appreciation is expressed to state supervisors and directors of trade and industrial education for their cooperation in furnishing the information requested, and the interest they have shown in this study.

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INTRODUCTION

During the fall of 1969, correspondence was sent to each department of trade and industrial education in all fifty states and the District of Columbia. Information was requested concerning academic and occupational experience requirements for teachers in secondary trades and industries programs, and post-secondary technical and trades courses. It was further requested that these requirements be defined as to whether they are the minimum acceptable for beginning teaching (provisional certification), or constitute full, non-provisional (standard) certification requirements.

At the secondary education level, fifty of the fifty-one states responded and are represented in this study.[1] Information concerning post-secondary programs was received from forty-eight states.

Academic requirements are broken down into specific courses, or course areas, where possible. Occupational experience requirements are divided into catagories of "learner period" and "beyond learner period" (journeyman level) in those states where a distinction is made between the two.

In all cases, information presented concerns the requirements for full-time teachers of regularly scheduled programs for the year 1969-1970.

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[1]For simplification of presentation, the District of Columbia is referred to as a state.

I

Minimum State Requirements for Beginning Teaching in Secondary Trades and Industries

I

Minimum State Requirements for Beginning Teaching in Secondary Trades and Industries

Academic Requirements - Provisional Certification

According to information received, thirty eight states offered provisional certification of teachers that do not meet the requirements for standard certification. In all thirty eight of these states, sufficient time was allowed for teachers to meet the requirements for standard certification while teaching under the provisional certificate.

To motivate the teacher to advance his education, thirty two of these states made renewal of provisional certificates contingent upon completion of specified course work during the term of the certificate. The other six states based certificate renewal upon satisfactory teacher performance, or emergency teacher shortage.

Twenty six of the thirty eight states offering provisional certificates required only a high school diploma to fulfill academic requirements for initial certification. Five states required completion of a short teacher training course in addition to the high school diploma.

The other seven states required varying amounts of college level course work as a prerequisite for provisional certification. In all seven, the required courses were in areas of teaching, and not technical areas supporting an occupational specialty.

Of the remaining twelve states that did not indicate the availability of provisional certificates, six specified a high school diploma as sufficient academic preparation for full, non-provisional certification. The other six states required the completion of a specific amount of college level course work for standard certification.

TABLE A: STATE REQUIREMENTS FOR VOCATIONAL TEACHERS
MINIMUM TO BEGIN TEACHING
SECONDARY TRADES & INDUSTRIES

STATES:	TYPE OF CERTIFICATION (PR=PROVISIONAL; ST=STANDARD; EM=EMERGENCY)	CERTIFICATION RENEWABLE ONLY ON COMPLETION OF PROFESSIONAL TEACHING COURSES	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
ALABAMA	ST 4 years		X							
ALASKA	PR 1 year	or teacher shortage	X							
ARIZONA	PR 1 year	5 semester hours	X "							
ARKANSAS	PR 1 year	3 sem.hrs. first year 9 total	X							
CALIFORNIA	PR 2 years	12 semester hours	X							
COLORADO	ST 5 years		X							
CONNECTICUT	PR 5 years	18 semester hours			X		2 courses	30 semester hours		
DELAWARE	PR 1 year	6 semester hours	X							
DISTRICT OF COLUMBIA	PR 1 year	no specific minimum			X		X		X	

	TYPE OF CERTIFICATION (PR=PROVISIONAL; ST=STANDARD; EM=EMERGENCY)	CERTIFICATION RENEWABLE ONLY ON COMPLETION OF PROFESSIONAL TEACHING COURSES	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (PHYSICS, MATH, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
FLORIDA	PR 1 year	3 semester hours	X							
GEORGIA	PR 1 year	5 quarter hours	X							
HAWAII	PR 2 years	9 semester hours	X							
IDAHO	PR 1 year		X							
ILLINOIS	PR no term specified	3 courses	X				X			
INDIANA	PR 2 years	6 semester hours	X							
IOWA	PR 6 years	B.S. DEGREE			X		X	X	X	X
KANSAS	PR 1 year	4 semester hours	X							
KENTUCKY	PR 1 year	2 semester hours	X							

	TYPE OF CERTIFICATION (PR=PROVISIONAL; ST=STANDARD; EM=EMERGENCY)	CERTIFICATION RENEWABLE ONLY ON COMPLETION OF PROFESSIONAL TEACHING COURSES	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHING TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
LOUISIANNA	ST		X							
MAINE	PR 3 years	12 semester hours	x							
MARYLAND	ST 3 years				18 semester hours		X			
MASSACHUSETTS	ST			260 clock hours						PASS PROFICIENCY EXAM
MICHIGAN	PR 1 year		X							
MINNESOTA	PR 1 year			6 clock hours						
MISSISSIPPI	PR 5 years	6 semester hours		10 clock hours						
MISSOURI	PR 2 years	20 sem. hrs. in 6 years	X							
MONTANA	PR 2 years	16 quarter hours	X							

	TYPE OF CERTIFICATION (PR=PROVISIONAL; ST=STANDARD; EM=EMERGENCY)	CERTIFICATION RENEWABLE ONLY ON COMPLETION OF PROFESSIONAL TEACHING COURSES	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY((MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
NEBRASKA	PR 5 years				X		X			
NEVADA	ST 2 years		X							
NEW HAMPSHIRE	ST	18 sem hrs. in 5 years		10 clock hours						
NEW JERSEY	PR 1 year	4 sem. hrs/year	X							
NEW MEXICO	PR 1 year	no specific minimum			24 semester hours					
NEW YORK	PR 10 years				48 semester hours		X	X	X	X
NORTH CAROLINA	PR 1 year	2 semester hours	X							
NORTH DAKOTA	PR 1 year	NO specific minimum		12 clock hours						
OHIO	ST 2 years		X							

	TYPE OF CERTIFICATION (PR=PROVISIONAL; EM=EMERGENCY)	CERTIFICATION RENEWABLE ONLY ON COMPLETION OF PROFESSIONAL TEACHING COURSES	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH; PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
OKLAHOMA	PR 1 year	8 quarter hours	X							
OREGON	PR 1 year		X							
PENNSYLVANIA	PR 3 years	18 semester hours			18 semester hours					
RHODE ISLAND										
SOUTH CAROLINA	PR 2 years	2 semester hours	X							PASS PROFICIENCY EXAM
SOUTH DAKOTA	PR 1 to 5 years	NO specific minimum	X							
TENNESSEE	ST 10 years	27 quarter hours		10 clock hours						
TEXAS	EM 1 year	3 courses	X							
UTAH	PR 2 years	9 quarter hours	X							

	TYPE OF CERTIFICATION (PR=PROVISIONAL; EM=EMERGENCY) ST=STANDARD;	CERTIFICATION RENEWABLE ONLY ON COMPLETION OF PROFESSIONAL TEACHING COURSES	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
VERMONT	EM 1 year	4 semester	X							
VIRGINIA	ST 5 years	12 semester hours	X							
WASHINGTON	PR 3 years	NO specific		15 clock hours						
WEST VIRGINIA	PR 1 year	5 semester hours	X							
WISCONSIN	ST 3 years	3 semester hours			X		X			
WYOMING	PR 1 year	4 semester hours		15 clock hours						

TABLE B: COLLEGE LEVEL COURSE REQUIREMENTS
MINIMUM TO BEGIN TEACHING
SECONDARY TRADES & INDUSTRIES

STATE:	GENERAL VOCATIONAL TEACHING COURSES (NON-SPECIFIC)	METHODS OF VOCATIONAL TEACHING	PRINCIPLES AND PHILOSOPHY OF VOCATIONAL EDUCATION	COURSE ANALYSIS, ORGANIZATION AND CURRICULUM	STUDENT TEACHING	PREPARATION AND USE OF INSTRUCTIONAL MATERIALS	TRADE OR OCCUPATIONAL ANALYSIS	EDUCATIONAL PSYCHOLOGY	VOCATIONAL GUIDANCE
NEW YORK	4 semester hours	4 semester hours	2 semester hours	4 semester hours	4 semester hours		4 semester hours	2 semester hours	4 semester hours
IOWA		X	X	X					
NEBRASKA	12 semester hours				X				
DISTRICT OF COLUMBIA		X						X	
CONNECTICUT	2 courses								
SOUTH CAROLINA		2 semester hours							
NEW MEXICO	24 semester hours								

According to information received, none of the fifty states included in this study indicated a requirement of a baccalaureate degree as minimum academic preparation for the provisional certification of trades and industries teachers.

Academic Requirements - Standard Certification

A total of sixteen states required baccalaureate degrees for full, non-provisional certification. In all sixteen, teachers were allowed to fulfill this requirement while teaching under a provisional certificate.

Three states required some college course work, in addition to a school sponsored pre-service teacher training course to qualify for standard certification. All three of these states allowed the course work requirements to be met while teaching under the provisional certification.

Nineteen states required various amounts of college level course work to fulfill academic requirements. All but New York and New Mexico allowed this requirement to be met under the provisional certificate.

Three states required a high school diploma plus a pre-service teacher training course. Massachusetts required that all out of state teachers complete a 260 clock hour pre-service training program regardless of previous academic achievement.[2]

Nine states required only a high school diploma to meet the academic requirements for full standard certification.

Specific Course Requirements - Standard Certification

Thirty-three states listed specific course titles or course descriptions in their requirements for standard certification. States which required

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[2]Letter from Ghernot L. Knox, Assistant Director of Massachusetts Department of Education, February 12, 1970.

TABLE C: STATE REQUIREMENTS FOR FULL, NON-PROVISIONAL CERTIFICATION OF VOCATIONAL TEACHERS SECONDARY, TRADES & INDUSTRIES

STATE:	EDUCATION REQUIREMENTS MAY BE SATISFIED UNDER PROVISIONAL CERTIFICATE	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE WORK REQUIREMENTS	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL DIPLOMA	VOCATIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA	GENERAL PROFESSIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	MAJOR IN TIED COURSES NOT SPECIFIED
ALABAMA	---				X					
ALASKA	YES	X				X	30 semester hours	18 semester hours		X
ARIZONA	YES		15 semester hours							
ARKANSAS	YES		9 semester hours		X	X				
CALIFORNIA	YES		72 semester hours			X	60 semester hours			
COLORADO	---				X					
CONNECTICUT	YES		60 semester hours			X			30 semester hours	
DELAWARE	YES		48 semester hours			X			X	
DISTRICT OF COLUMBIA	YES	X				X				

	EDUCATION REQUIREMENTS MAY BE SATISFIED UNDER PROVISIONAL CERTIFICATE	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL DIPLOMA	VOCATIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA	GENERAL PROFESSIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	MAJOR IN T.I.Ed. COURSES NOT SPECIFIED
FLORIDA	YES	X			X		3 Semester Hours			
GEORGIA	NO	X			X	X	X	X		
HAWAII	YES		78 Semester Hours		X	60 Semester Hours				
IDAHO	—			X						
ILLINOIS	YES	X			X	32 Semester Hours	42 Semester Hours	30 Semester Hours		
INDIANA	YES		1200 Clock Hours	15 Clock Hours	X	X				
IOWA	YES	X			X		X			
KANSAS	YES	X			X		X			
KENTUCKY	YES		24 Semester Hours		X					

	EDUCATION REQUIREMENTS MAY BE SATISFIED UNDER PROVISIONAL CERTIFICATE	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL DIPLOMA	VOCATIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA	GENERAL PROFESSIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	MAJOR IN T.I. Ed. COURSES NOT SPECIFIED
LOUISIANNA	--			X						
MAINE	YES	X								X
MARYLAND	YES		18 Semester Hours		X					
MASSACHUSETTS	YES			20 Clock Hours		Pass Trade Proficiency Exam				
MICHIGAN	YES				X					
MINNESOTA	YES			24 Clock Hours						
MISSISSIPPI	YES		18 Semester Hours		X		X			
MISSOURI	YES		20 Semester Hours		X					
MONTANA	YES		X		X			20 Semester Hours		

	EDUCATION REQUIREMENTS MAY BE SATISFIED UNDER PROVISIONAL CERTIFICATE	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE WORK REQUIREMENTS	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL DIPLOMA	VOCATIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA	GENERAL PROFESSIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	MAJOR IN TIED COURSES NOT SPECIFIED
NEBRASKA	YES	X				X				
NEVADA	-				X					
NEW HAMPSHIRE	YES		18 Semester Hours	10 Clock Hours		X		X		
NEW JERSEY	YES	X								X
NEW MEXICO	NO		24 Semester Hours			X				
NEW YORK	NO		48 Semester Hours			X	X		X	
NORTH CAROLINA	YES		12 Semester Hours			X				
NORTH DAKOTA	YES		21 Quarter Hours			X				
OHIO	--				X					

	EDUCATION REQUIREMENTS MAY BE SATISFIED UNDER PROVISIONAL CERTIFICATE	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	HIGH SCHOOL PLUS COLLEGE COURSE WORK (LESS THAN COLLEGE DEGREE)	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL DIPLOMA	VOCATIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA	GENERAL PROFESSIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	MAJOR IN TIED COURSES NOT SPECIFIED
OKLAHOMA	YES	X				X					
OREGON	YES		48 QUARTER Hours			X			X		
PENNSYLVANIA	YES	X				X					
RHODE ISLAND											
S. CAROLINA	YES		2 Semester Hours				Pass Proficiency Exam				
S. DAKOTA	YES	X				X		X	X		
TENNESSEE	YES		27 Quarter Hours	10 Clock Hours		X					
TEXAS	--				X						
UTAH	--				X						

	EDUCATION REQUIREMENTS MAY BE SATISFIED UNDER PROVISIONAL CERTIFICATE	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE WORK REQUIREMENTS	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL DIPLOMA	VOCATIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA	GENERAL PROFESSIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	MAJOR IN T. I. ED. COURSES
VERMONT	YES		12 semester hours			X				
VIRGINIA	---				X					
WASHINGTON	---			15 clock hours						
WEST VIRGINIA	YES		20 semester hours			X		X		
WISCONSIN	YES	X				X				
WYOMING	YES	X				X				

TABLE D: SPECIFIC COURSE REQUIREMENTS
FOR FULL, NON-PROVISIONAL VOCATIONAL CERTIFICATION

SECONDARY, TRADES & INDUSTRIES

STATE: In order of Most Specific Requirements	VOCATIONAL TEACHING COURSES (NON-SPECIFIC)	METHODS OF VOCATIONAL TEACHING	PRINCIPLES AND PHILOSOPHY OF VOCATIONAL EDUCATION	COURSE ANALYSIS, ORGANIZATION AND CURRICULUM	STUDENT TEACHING	PREPARATION AND USE OF INSTRUCTIONAL MATERIALS	TRADE OR OCCUPATIONAL ANALYSIS	METHODS OF SECONDARY TEACHING	EDUCATIONAL PSYCHOLOGY	VOCATIONAL GUIDANCE	TESTS AND MEASUREMENTS
NEW YORK	4 semester hours	4 semester hours	2 semester hours	4 semester hours	4 semester hours		4 semester hours	2 semester hours	2 semesters	2 semester hours	
DELAWARE		X	X	X		X	X	X	X	X	X
NORTH CAROLINA	X	X	X	X		X	X	X		X	
CONNECTICUT		X	X			X	X	X	X		X
MONTANA		X	X	X	150 clock hours	X	X			X	
DISTRICT OF COLUMBIA	6 semester hours	X	X		X	X			X		X
MISSISSIPPI		3 semester hours		6 semester hours	6 semesters	3 semester hours	3 semester hours	3 semester hours			
MARYLAND	X	X		X	X		X				X
KENTUCKY	X	4 semester hours	4 semester hours	4 semester hours		2 semester hours				X	

	VOCATIONAL TEACHING COURSES (NON-SPECIFIC)	METHODS OF VOCATIONAL TEACHING	PRINCIPLES AND PHILOSOPHY OF VOCATIONAL EDUCATION	COURSE ANALYSIS, ORGANIZATION AND CURRICULUM	STUDENT TEACHING	PREPARATION AND USE OF INSTRUCTIONAL MATERIALS	TRADE OR OCCUPATIONAL ANALYSIS	METHODS OF SECONDARY TEACHING	EDUCATIONAL PSYCHOLOGY	VOCATIONAL GUIDANCE	TESTS AND MEASUREMENTS
NEW HAMPSHIRE			X	X		X		X	X		X
WEST VIRGINIA	X	X	X	X		X	X	X	X	X	X
CALIFORNIA	3 semester hours	3 semester hours	3 semester hours		3 semester hours						
IOWA	X	X	X	X							
MISSOURI	X	X		X			X				
FLORIDA	X	X	X								
ILLINOIS		X		X	X	X		X	X		
HAWAII		X	X		X						
SOUTH DAKOTA	X				6 semester hours				2 semester hours		

	VOCATIONAL TEACHING COURSES (NON-SPECIFIC)	METHODS OF VOCATIONAL TEACHING	PRINCIPLES AND PHILOSOPHY OF VOCATIONAL EDUCATION	COURSE ANALYSIS, ORGANIZATION AND CURRICULUM	STUDENT TEACHING	PREPARATION AND USE OF INSTRUCTIONAL MATERIALS	TRADE OR OCCUPATIONAL ANALYSIS	METHODS OR SECONDARY TEACHING	EDUCATIONAL PSYCHOLOGY	VOCATIONAL GUIDANCE	TESTS AND MEASUREMENTS
WISCONSIN	34 semester hours		X								
ALASKA		3 semester hours			X						
OREGON	X				X						
ARKANSAS		X	choice for 9 semester hours X	X	X		X				
NEBRASKA	12 semester hours				X						
MICHIGAN	12 semester hours				X						
GEORGIA	X										
INDIANA	X										
NEW MEXICO	X										

	VOCATIONAL TEACHING COURSES (NON-SPECIFIC)	METHODS OF VOCATIONAL TEACHING	PRINCIPLES AND PHILOSOPHY OF VOCATIONAL EDUCATION	COURSE ANALYSIS: ORGANIZATION AND CURRICULUM	STUDENT TEACHING	PREPARATION AND USE OF INSTRUCTIONAL MATERIALS	TRADE OR OCCUPATIONAL ANALYSIS	METHODS OF SECONDARY TEACHING	EDUCATIONAL PSYCHOLOGY	VOCATIONAL GUIDANCE	TESTS AND MEASUREMENTS
NORTH DAKOTA	X										
PENNSYLVANIA	36 semester hours										
SOUTH CAROLINA		X									
VERMONT	X										
TENNESSEE	X										
WYOMING	12 semester hours										

baccalaureate degrees are included in this catagory, as well as those states that required college level course work but less than a four year degree.

New York was the most specific in this area; naming course areas, titles, and required credit hours in each.

The course most often specified by these thirty-three states was "Methods of Vocational Teaching," while "Vocational Guidance: and "Tests and Measurements" were specified the least number of times.[3]

The most common practice, however, was to indicate broad course areas without specific mention of course titles or content.

Work Experience Requirements

Work experience requirements for secondary trades and industries teacher certification not only varied greatly from state to state; but also varied within a state depending upon the academic accomplishment of prospective teachers. For example, Arizona reduced the work experience requirement for Masters degree teachers from 3 years to 2 years.[4] On the other hand, Idaho and the District of Columbia considered work experience as fulfilling college training requirements. D.C. offered this on an individual evaluation basis.[5] Idaho specified that each two years of work experience would be considered equivalent to one year of college.[6]

Considering the various methods of determining work experience requirements among states it is difficult to divide them into categories of

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[3]Some course titles vary slightly in wording from those presented and have been commonly grouped.

[4]Arizona Department of Vocational Education, Certification Requirements, Leaflet, Received May 7, 1970.

[5]Letter from Addison S. Hobbs, Supervising Director, Trade and Industrial Education, Washington, D.C., February 11, 1970.

[6]Idaho State Plan for the Administration of Vocational Education, Part 1, 33-12.

"provisional certification" and "Standard certification". Therefore, the subject is presented, by state, in terms of academic or professional levels. Wisconsin apparently had the lowest experience requirement of all the states in this study, with a required 2000 hours in the past ten year period. Technical school graduates were allowed to waive two-fifths of this requirement leaving a minimum experience requirement of 1200 hours.[7]

Illinois followed Wisconsin with a flat 2000 hour experience requirement in the specialty to be taught.[8]

As previously mentioned, Arizona reduced its work experience requirements as academic achievement increased. It was the only state which specified a reduction in this requirement for holders of the Masters degree.

Michigan did not require a specific amount of work experience. Trade competency in this state was determined by demonstration and examination.[9]

Massachusetts appeared at the opposite end of the scale with a requirement of eight years total work experience, four of which must have been at the journeyman level. Technical or trade school credit could reduce the total to six years, but the four year journeyman level requirement remained the same in all cases.[10]

Several states reduced the employment requirement for persons who held state licensure in the trade to be taught. Delaware and South Dakota waived all work experience requirements for persons of this status.

Three states required prospective teachers to successfully complete trade competency examinations. These exams were in addition to a specified number of years work experience.

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[7]Wisconsin Administrative Code, Chapter A-V-1.02 and A-V-1.03, May, 1969.

[8]Illinois, Standards for Approval of Local Programs and Personnel, Bulletin No. 217, September, 1969, p. 4.

[9]Michigan State Plan for Vocational Education, Part 1.33-1, 1969.

[10]Letter from Knox, February 12, 1970.

TABLE E: WORK EXPERIENCE REQUIREMENTS
SECONDARY TRADES AND INDUSTRIES

STATE:	WITH H.S. DIPLOMA, AND NO TRADE OR TECHNICAL SCHOOL COURSE WORK	TECHNICAL OR TRADE SCHOOL GRADUATE (2 YEAR)	COLLEGE DEGREE WITH MAJOR IN TRADE & INDUSTRIAL EDUCATION	MASTERS DEGREE	HOLDS STATE LICENSURE IN TRADE TO BE TAUGHT	MUST PASS COMPETENCY EXAM	COMPETENCY EXAM IN LIEU OF WORK EXPERIENCE
ALABAMA	7 TOTAL	3 in preceding 8	3 in preceding 8	NOT Specified	NOT Specified		
ALASKA	3 TOTAL	2 TOTAL	2 TOTAL	"	"		
ARIZONA	4 TOTAL	NOT SPECIFIED	3 TOTAL	2 TOTAL	"		
ARKANSAS	JOURNEYMAN STATUS	JOURNEYMAN STATUS	JOURNEYMAN STATUS	NOT SPECIFIED	NOT SPECIFIED		
CALIFORNIA	3	3	3 TOTAL	NOT SPECIFIED	3 TOTAL		
CONNECTICUT	3 TOTAL	3 TOTAL	3 TOTAL	NOT SPECIFIED	NOT SPECIFIED		
COLORADO	5 TOTAL	Less, but not specified	Less, but not specified	NOT SPECIFIED	NOT SPECIFIED	X	
DELAWARE	6 total 4 at journeyman	2	6 total 4 at journeyman	NOT SPECIFIED	0		
WASHINGTON, D.C.	3 TOTAL	3 TOTAL	3 TOTAL	NOT SPECIFIED	NOT SPECIFIED		

	WITH H.S. DIPLOMA, AND NO TRADE OR TECHNICAL SCHOOL COURSE WORK	TECHNICAL OR TRADE SCHOOL GRADUATE (2 YEAR)	COLLEGE DEGREE WITH MAJOR IN TRADE & INDUSTRIAL EDUCATION	MASTERS DEGREE	HOLDS STATE LICENSURE IN TRADE TO BE TAUGHT	MUST PASS COMPETENCY EXAM	COMPETENCY EXAM IN LIEU OF WORK EXPERIENCE
FLORIDA	6 total 2 at journeyman	2 TOTAL	2	NOT SPECIFIED	2 TOTAL		
GEORGIA	2	2	1	NOT SPECIFIED	NOT SPECIFIED		
HAWAII	3	4 TOTAL	3 TOTAL	NOT SPECIFIED	NOT SPECIFIED		
IDAHO	3 TOTAL	3 TOTAL	0	"	"		
ILLINOIS	1 TOTAL	1 TOTAL	1 TOTAL	"	"		
INDIANA	3 TOTAL	3 TOTAL	3 TOTAL	"	"		
IOWA	3 TOTAL	3 TOTAL	3 TOTAL	"	"		
KANSAS	2	2	2	"	"		
KENTUCKY	3 TOTAL	3 TOTAL	3 TOTAL	"	"		

	WITH H. S. DIPLOMA; AND NO TRADE OR TECHNICAL SCHOOL COURSE WORK	TECHNICAL OR TRADE SCHOOL GRADUATE (2 YEAR)	COLLEGE DEGREE WITH MAJOR IN TRADE & INDUSTRIAL EDUCATION	MASTERS DEGREE	HOLDS STATE LICENSURE IN TRADE TO BE TAUGHT	MUST PASS COMPETENCY EXAM	COMPETENCY EXAM IN LIEU OF WORK EXPERIENCE
LOUISIANNA	6 TOTAL	4 TOTAL	2 TOTAL	NOT SPECIFIED	NOT SPECIFIED		
MAINE	3	3 TOTAL	3	"	"		
MARYLAND	5 TOTAL	5 TOTAL	2 TOTAL	"	"		
MASSACHUSETTS	8 total 4 at journeyman	6 total 4 at journeyman	8 total 4 at journeyman	"	"	X	
MICHIGAN	NO SPECIFIC REQUIREMENTS						X
MINNESOTA	3	3	3	NOT SPECIFIED	NOT SPECIFIED		
MISSISSIPPI	2	2	2	"	"		
MISSOURI	3	2 TOTAL	2 TOTAL	"	"		
MONTANA	6 TOTAL	6 TOTAL	6 TOTAL	"	"		

	WITH H. S. DIPLOMA, AND NO TRADE OR TECHNICAL SCHOOL COURSE WORK	TECHNICAL OR TRADE SCHOOL GRADUATE (2 YEAR)	COLLEGE DEGREE WITH MAJOR IN TRADE & INDUSTRIAL EDUCATION	MASTERS DEGREE	HOLDS STATE LICENSURE IN TRADE TO BE TAUGHT	MUST PASS COMPETENCY EXAM	COMPETENCY EXAM IN LIEU OF WORK EXPERIENCE
NEBRASKA	2 TOTAL	2 TOTAL	none if program included internship	NOT SPECIFIED	NOT SPECIFIED		
NEVADA	3	3 TOTAL	2	"	"		
NEW HAMPSHIRE	2	2 TOTAL	8 MONTHS	"	"		
NEW JERSEY	6 TOTAL	5 TOTAL	NOT SPECIFIED	"	"		
NEW MEXICO	3 TOTAL	2 TOTAL	"	"	"		
NEW YORK	5	5 TOTAL	5	"	"		
NORTH CAROLINA	2	2 TOTAL	2	NOT SPECIFIED	NOT SPECIFIED		
NORTH DAKOTA	3 TOTAL	3 TOTAL	3 TOTAL	"	"		
OHIO	7 total 3 at journeyman	5 total 3 at journeyman	7 total 3 at journeyman	"	"		

	WITH H.S. DIPLOMA, AND NO TRADE OR TECHNICAL SCHOOL COURSE WORK	TECHNICAL OR TRADE SCHOOL GRADUATE (2 YEAR)	COLLEGE DEGREE WITH MAJOR IN TRADE & INDUSTRIAL EDUCATION	MASTERS DEGREE	HOLDS STATE LICENSURE IN TRADE TO BE TAUGHT	MUST PASS COMPTEENCY EXAM	COMPETENCY EXAM IN LIEU OF WORK EXPERIENCE
OKLAHOMA	2 TOTAL	2 TOTAL	2 TOTAL	NOT SPECIFIED	NOT SPECIFIED		
OREGON	2 TOTAL	2 TOTAL	2 TOTAL	"	"		
PENNSYLVANIA	2	2	2	"	"		
RHODE ISLAND							
SOUTH CAROLINA	3	3	3	"	"	X	
SOUTH DAKOTA	NOT SPECIFIED	0	NOT SPECIFIED	"	0		
TENNESSEE	2	2 TOTAL	2	"	NOT SPECIFIED		
TEXAS	5 TOTAL	3 TOTAL	NOT SPECIFIED	"	"		
UTAH	6 total 3 at journeyman	4 total 3 at journeyman	3	NOT SPECIFIED	"		

	WITH H.S. DIPLOMA, AND NO TRADE OR TECHNICAL SCHOOL COURSE WORK	TECHNICAL OR TRADE SCHOOL GRADUATE (2 YEAR)	COLLEGE DEGREE WITH MAJOR IN TRADE & INDUSTRIAL EDUCATION	MASTERS DEGREE	HOLDS STATE LICENSURE IN TRADE TO BE TAUGHT	MUST PASS COMPETENCY EXAM	COMPETENCY EXAM IN LIEU OF WORK EXPERIENCE
VERMONT	2	2 TOTAL	2	NOT SPECIFIED	NOT SPECIFIED		
VIRGINIA	2	2	2	"	"		
WASHINGTON	3 in past 6 years	3 TOTAL	3 in past 6 years	"	"		
WEST VIRGINIA	6 TOTAL	4 TOTAL	6 TOTAL	"	"		
WISCONSIN	1 total in past 10 years	3/5 year	NOT SPECIFIED	"	"		
WYOMING	2	less, but not specified	less, but not specified	"	"		

Arkansas specified "journeyman status" as their work experience requirement, rather than a certain number of years as the period of learner training.[11]

All states which differentiated between "learner period" and "beyond learner period" or "journeyman level" would accept trade or technical school training on the same basis as apprenticeship training. However, in no instance was formal school training accepted in lieu of journeyman work experience in those states where journeyman experience was required.

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[11] Arkansas State Plan for Vocational Education, Part 1.3, p. 16.

II

Minimum State Requirements for Beginning Teaching in Post Secondary Technical and Trades

II

Minimum State Requirements for Beginning Teaching in Post Secondary Technical and Trades

Due to the differences in scope and emphasis between trades and technical programs, requirements for teachers in these two areas were not the same in many states. Therefore, post-secondary vocational teacher requirements in these two areas are presented separately.

Academic Requirements - Trades Programs

Information received from forty-eight states indicates that thirty-one states considered a high school diploma as meeting the minimum academic requirements for trades teachers. Of these thirty-one states, twenty based contract renewal upon completion of teacher education courses during the term of the previous contract. The types and credit hour requirements of these courses varied from state to state. Alaska indicated deferral of this renewal requirement in the face of sufficient teacher shortage; however, advancement in salary was limited under this condition.[12]

In the other eleven states, no further academic preparation was required for continuation of teacher employment.

Seven states required short, pre-service teacher training courses in addition to high school completion. These varied in length from fifteen clock hours to 260 clock hours.

Seven states required some college preparation prior to teaching. Kentucky required two years of technical training in the specialty area.[13]

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[12] State of Alaska, Department of Education, A Summary of Certification Requirements for Teachers, March 1, 1967, p. 7.

[13] Kentucky State Plan for the Administration of Vocational Education, Part 1.33-1, p. 14.

TABLE F: STATE REQUIREMENTS FOR VOCATIONAL TEACHERS
POST-SECONDARY TRADES
MINIMUM EDUCATION REQUIREMENTS

STATE:	STATE CERTIFICATION REQUIRED?	CERTIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPERIENCE REQUIRED BEYOND LEARNER PERIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
ALABAMA	YES	4 TIED courses in first 2 years	7 yrs. or 18 mo. & pass exam	X							
ALASKA	YES	or Teacher shortage	3 TOTAL	X							
ARIZONA	YES	5 semester hours	4 TOTAL	X							
ARKANSAS	YES	3 semester hours first yr	2	X							
CALIFORNIA	YES	12 semester hours	3	X							
COLORADO	NO	NO	5 TOTAL	X							
CONNECTICUT	YES	NO	3				X	X			X
DELAWARE											
DISTRICT OF COLUMBIA	YES	No specific minimum	3 TOTAL			X		X		X	

	STATE CERTIFICATION REQUIRED?	CERTIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPERIENCE REQUIRED BEYOND LEARNER PERIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
FLORIDA	YES	3 semester hours	6 Total 2 at Journeyman	X							
GEORGIA	NO	NO	2	X							
HAWAII	YES	9 semester hours	3	X							
IDAHO	YES	NO	3 TOTAL	X							
ILLINOIS	NO	3 courses	1 TOTAL	X							
INDIANA	YES	6 semester hours	3 total	X							
IOWA	YES	B.S. DEGREE	3 TOTAL			X		X	X	X	X
KANSAS	YES	4 semester hours	2	X							
KENTUCKY	YES	NO	4			A.B.S. DEGREE					

	STATE CERTIFICATION REQUIRED?	CERTIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPERIENCE REQUIRED BEYOND LEARNER PERIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOLPLUS SCHOOL SPONSORED PRE-SERVICE TEACHER-TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
LOUISIANA	YES	NO	6 TOTAL	X							
MAINE	YES	12 semester hours	3	X							
MARYLAND											
MASSACHUSETTS	YES	NO	8 TOTAL 4 at journeyman		260 cl. hrs.						
MICHIGAN	YES	NO	NOT SPECIFIED	X							
MINNESOTA	YES	NO	3		6 clock hours						
MISSISSIPPI	YES	6 semester hours	2		10 clock hours						
MISSOURI	YES	20 sem. hrs. in 6 yrs.	3	X							
MONTANA	NO	16 quarter hours	6 TOTAL	X							

	STATE CERTIFICATION REQUIRED?	CERTIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPERIENCE REQUIRED BEYOND LEARNER PERIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
NEBRASKA	YES	NO	2 TOTAL			X		X			
NEVADA	YES	NO	3	X							
NEW HAMPSHIRE	YES	NO	4 TOTAL	X							
NEW JERSEY	YES	4 semester hours	6 TOTAL	X							
NEW MEXICO	YES	No specific minimum	3 TOTAL			24 semester hours					
NEW YORK	NO	NOT SPECIFIED									
NORTH CAROLINA	NO	2 semester hours	2	X							
NORTH DAKOTA	YES	No Specific Minimum	3 TOTAL		12 clock hours						
OHIO	YES	NO	1 TOTAL			1 year					

	STATE CERTIFICATION REQUIRED?	CERIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPERIENCE REQUIRED BEYOND LEARNER PERIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH., PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
OREGON	YES	NO	2 TOTAL	X							
OKLAHOMA	YES	8 quarter hours	2 TOTAL	X							
PENNSYLVANIA	YES	18 semester hours	2		18 semester hours						
RHODE ISLAND											
SOUTH CAROLINA	YES	NO	NOT SPECIFIC	X							
SOUTH DAKOTA	YES	8 semester hrs./year	3		30 clock hours						
TENNESSEE	YES	NO	2 TOTAL	X							
TEXAS	YES	NO	3 TOTAL	X							
UTAH	YES	9 quarter hours	6 Total 3 at Journeyman	X							

	STATE CERTIFICATION REQUIRED?	CERTIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPERIENCE REQUIRED BEYOND LEARNER PERIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
VERMONT	YES	4 semester hours	2	X							
VIRGINIA	YES	12 semester hours	2	X							
WASHINGTON	YES	NO SPECIFIC MINIMUM	3 in past 6		15 clock hours						
WEST VIRGINIA	YES	5 semester hours	6 TOTAL	X							
WISCONSIN	YES	NO	1 TOTAL				X				
WYOMING	YES	4 semester hours	2	15 clock hours							

Iowa required some training in both professional teaching and technical areas.[14] The other five states required college level course work in vocational teaching areas only.

Two states required a baccalaureate degree for teachers in post-secondary trades programs. These preferred graduates who had majored in industrial education.

Work Experience Requirements - Trades Programs

Work experience requirements for post-secondary trades teachers generally paralleled those for secondary trades and industries. In most instances, these experience requirements did not vary as much with different academic achievement levels, as was the case with secondary trades and industries programs.

Specific Course Requirements - Trades Programs

As previously mentioned, nine states required academic achievement beyond high school. Two of these nine required baccalaureate degrees and seven required college level course work, but less than a baccalaureate degree.

Seven of these states specified that the courses be in areas of vocational teaching, while Ohio gave alternatives of technical training or regular college courses.[15] Kentucky required two years of technical school training, with no required courses in vocational teaching.[16]

Academic Requirements - Technical Programs

Thirty-seven of the forty-eight states included in this study indicated the same academic requirements for technical program teachers as for trades teachers. Requirements outlined by the remaining eleven states indicated

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[14] Iowa State Plan for Vocational Education, Part 1.33-15, p.20.

[15] Ohio, Manual of Operation for Trade and Industrial Education, Section II, p.20.

[16] Kentucky State Plan, Part 1.33-1, p. 14.

TABLE G: SPECIFIC COURSE REQUIREMENTS
POST-SECONDARY TRADES PROGRAMS

STATE:	B.S. IN TECHNICAL AREA TO BE TAUGHT	VOCATIONAL TEACHING COURSES (NON-SPECIFIC)	METHODS OF VOCATIONAL TEACHING	PRINCIPLES AND PHILOSOPHY OF VOCATIONAL EDUCATION	COURSE ANALYSIS; ORGANIZATION AND CURRICULUM	STUDENT TEACHING	EDUCATION PSYCHOLOGY	GENERAL COLLEGE COURSES	TECHNICAL COURSES IN TEACHING AREA
CONNECTICUT	X	2 courses							
DISTRICT OF COLUMBIA			X				X		
IOWA			X	X	X				
KENTUCKY									A.B.S. degree
NEBRASKA		12 semester hours				X			
NEW MEXICO		24 semester hours							
OHIO								1 YEAR OR	1 YEAR
PENNSYLVANIA		18 semester hours							
WISCONSIN	X								

greater emphasis on formal school training. In all eleven, this training was in the technical areas to be taught, and not in professional teacher education courses.

Work Experience Requirements - Technical Programs

Thirteen states indicated work experience requirements for technical teachers different from their requirements for trades teachers. In all thirteen this requirement was less for technical program teachers. Alabama waived all required work experience upon successful completion of a competency exam.[17] Four other states, which had specific requirements for trades teachers, made no specific requirements for technical teachers. Arizona required only that the person be "outstanding in his field".[18]

Although not specifically mentioned by each state, technical occupations that required state licensure generally required this licensing of teachers in addition to the work experience requirements specified by the states.

Specific Course Requirements - Technical Programs

All eleven states indicating differences between technical and trades teacher requirements, specified increased concentration in the specialty area to be taught. Seven of these states required technical school training, while four required baccaluareate degrees in the technical areas to be taught. Two states specified some professional teaching courses in addition to technical school courses.

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17 Letter from J.C. Lindley, Assistant State Supervisor, Trade and Industrial Education, April 23, 1970.

18 Arizona, Requirements for Teacher Certification, Leaflet, May, 1970, p. V-19.

TABLE II: STATE REQUIREMENTS FOR TEACHERS
POST-SECONDARY - TECHNICAL AREAS
MINIMUM EDUCATION REQUIREMENTS

	STATE CERTIFICATION REQUIRED?	CERTIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPERIENCE REQUIRED BEYOND LEARNER PERIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
ALABAMA	YES	NO	3 years or pass exam		X						X
ALASKA	YES	or teacher shortage	3 TOTAL	X							6 semester hours
ARIZONA	YES	6 clock hours	"OUTSTANDING IN THEIR FIELD"	X							
ARKANSAS	YES	3 semester hours in first year	2	X							
CALIFORNIA	YES	12 semester hours	3	X							
COLORADO	NO	NO	5 TOTAL	X							
CONNECTICUT	YES	NO	3			X	X				X
DELAWARE											
DISTRICT OF COLUMBIA	YES	NO specific minimum	3 TOTAL		X		X		X		

	STATE CERTIFICATION REQUIRED?	CERTIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPERIENCE REQUIRED BEYOND LEARNER PERIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
FLORIDA	YES	NO	2			X	X				X
GEORGIA	NO	NO	2		2 years						X
HAWAII	YES	no specific minimum	3years plus exam	X							
IDAHO	YES	NO	3 TOTAL	X							
ILLINOIS	NO	3 courses	1 TOTAL	X							
INDIANA	YES	6 semester hours	3 TOTAL	X							
IOWA	YES	B.S. DEGREE	3 TOTAL		X		X	X	X	X	
KANSAS	YES	4 semester hours	2	X							
KENTUCKY	YES	NO	4		A.B.S. Degree						

	STATE CERTIFICATION REQUIRED?	CERTIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPERIENCE REQUIRED BEYOND LEARNER PERIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TEACHING COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
MAINE	YES	12 semester hours	3	X							
MARYLAND											
MASSACHUSETTS	YES	NO	8 total 4 at journeyman	260 clock hours							
LOUISIANNA	YES	NO	6 TOTAL	X							
MICHIGAN	YES	NO	NOT SPECIFIED	X							
MINNESOTA	YES	NO	3	6 clock hours							
MISSISSIPPI	YES	6 semester hours	2	10 clock hours							
MISSOURI	YES	20 sem. hrs. in 6 years	3	X							
MONTANA	NO	16 quarter hours	6 TOTAL	X							

	STATE CERTIFICATION REQUIRED?	CERTIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPERIENCE REQUIRED BEYOND LEARNER PERIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE (INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
NEBRASKA	YES	NO	2 TOTAL			X		X			
NEVADA	YES	NO	3	X							
NEW HAMPSHIRE	YES	NO	2				X				
NEW JERSEY	YES	4 sem. hrs/year	6 TOTAL	X							
NEW MEXICO	YES	NO	2			A.B.S.		X			
NEW YORK	NO		N O T S P E C I F I E D								
NORTH CAROLINA	NO	NO	NOT SPECIFIC				X				
NORTH DAKOTA	YES	no specific minimum	3 TOTAL		12 clock hours						
OHIO	YES	NO	1 TOTAL			1 year					

	STATE CERTIFICATION REQUIRED?	CERTIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPERIENCE REQUIRED BEYOND LEARNER PERIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE (INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
OKLAHOMA	YES	8 quarter hours	2 TOTAL	X							
OREGON	YES	NO	2 TOTAL	X							
PENNSYLVANIA	YES	18 semester hours	2			18 semester hours					
RHODE ISLAND											
SOUTH CAROLINA	YES	NO	NOT SPECIFIC				X				
SOUTH DAKOTA	YES	8 sem. hrs/year	3		30 clock hours						
TENNESSEE	YES	NO	NOT SPECIFIC			A.B.S.					
TEXAS	YES	NO	3 TOTAL			2 years					X
UTAH	YES	9 quarter hours	6 total 3 at journeyman	X							

	STATE CERTIFICATION REQUIRED?	CERTIFICATE RENEWAL CONTINGENT UPON COMPLETION OF TEACHING COURSES	WORK EXPEREINCE REQUIRED BEYOND LEARNER PEPIOD	HIGH SCHOOL DIPLOMA	HIGH SCHOOL PLUS SCHOOL SPONSORED PRE-SERVICE TEACHER TRAINING	HIGH SCHOOL PLUS COLLEGE LEVEL COURSE WORK (LESS THAN COLLEGE DEGREE)	COLLEGE DEGREE INCLUDING SPECIFIC MAJOR OR COURSE REQUIREMENTS	VOCATIONAL TEACHING COURSES	TECHNICAL COURSES SUPPORTING SPECIALTY (MATH, PHYSICS, DRAFTING, ETC.)	GENERAL PROFESSIONAL TEACHING COURSES	COURSES DIRECTLY IN SPECIALTY AREA
VERMONT	YES	4 semester hours	2	X							
VIRGINIA	YES	12 semester hours	2	X							
WASHINGTON	YES	no specific minimum	3 in past 6 years		15 clock hours						
WEST VIRGINIA	YES	5 semester hours	3 TOTAL			2 years					X
WISCONSIN	YES	NO	1 TOTAL				X				
WYOMING	YES	4 semester hours	2		15 clock hours						

TABLE J

Specific Course Requirements

Post Secondary Technical Programs

STATE	B.S. in technical area to be taught	Vocational Teaching Courses (non-specific)	Methods of Vocational Teaching	Principles & Philosophy of Vocational Education	Technical Courses in Teaching Area
Alabama					2 years
Alaska					6 semester hrs.
Flordia	X		3 semester hours	3 semester hours	
Georgia					2 years
New Hampshire	X				
New Mexico		12 semester hours			A.B.S. degree
North Carolina	X				
South Carolina	X				
Tennessee					A.B.S. degree
Texas					2 years
West Virginia					2 years

III

CONCLUSIONS

Based upon the information received, the most noticeable aspect of state certification requirements at both the secondary and post secondary levels of trade and industrial programs was the emphasis upon work experience rather than formal education for the beginning teacher. The major trend seems to be a demand for occupational competence at the outset, with teaching competence to be developed on an in-service training basis. However, many states required little or no professional teacher training before or after the teacher had been employed.

Post secondary teacher qualification requirements seem to have been patterned after the requirements for secondary teachers in most states. The exception to this trend is in the post secondary technical programs, in which technical knowledge took precedence over years of job experience in many states. Teacher qualification requirements at the post secondary level were generally less specific than secondary requirements, possibly to allow more latitude in teacher recruitment and preparation.

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